

WHAT IS CLAIMED IS:

1. A method of preconditioning a resin useful for removal of organic impurities from a hydrogen peroxide solution, comprising the steps of:

- (a) rinsing the resin with deionized water;
- (b) contacting the resin with an acid solution; and
- (c) rinsing the acid-treated resin with deionized water.

2. The method of claim 1, wherein the acid solution is selected from the group consisting of a hydrochloric acid solution, a nitric acid solution and a sulfuric acid solution.

3. The method of claim 2, wherein the acid solution is a hydrochloric acid solution.

4. The method of claim 3, wherein the molar ratio of hydrochloric acid to water in the hydrochloric acid solution is from about 1:100 to 1:90.

5. The method of claim 1, wherein step (b) is conducted for from about 3 to 8 hours.

6. The method of claim 1, wherein step (b) comprises soaking the resin in the acid solution in a batch mode.

7. The method of claim 6, wherein step (b) further comprises separating the resin and the acid

Suba

solution and contacting the resin with a second acid solution, which is of the same type and concentration as the acid solution.

8. The method of claim 1, wherein the contacting in step (b) comprises introducing the resin and the acid solution into a vessel separating the resin and the acid solution and contacting the resin with a second acid solution.

9. The method of claim 1, wherein the resin is hydrophobic.

10. The method of claim 9, wherein the resin is AMBERLITE XAD-4 or AMBERSORB 563.

11. A resin preconditioned by the method of claim 1.

12. The resin of claim 11, wherein the resin is hydrophobic.

13. The resin of claim 11, wherein the resin is AMBERLITE XAD-4 or AMBERSORB 563.

14. The resin of claim 11, wherein the resin is effective to maintain an essentially constant temperature when contacted with a hydrogen peroxide solution for at least eleven hours.

Suba1

15. A method of removing organic impurities from a hydrogen peroxide solution, comprising passing the hydrogen peroxide solution through a column containing a resin bed, wherein the resin making up the resin bed has been preconditioned by a method comprising the steps of:

- (a) rinsing the resin with deionized water;
- (b) contacting the resin with an acid solution; and
- (c) rinsing the acid treated resin with deionized water.

16. The method of claim 15, wherein the hydrogen peroxide solution has a hydrogen peroxide concentration of 50 wt% or less.

17. The method of claim 16, wherein the hydrogen peroxide solution has a hydrogen peroxide concentration of about 30 wt%.

18. The method of claim 15, wherein the resin is hydrophobic.

19. The method of claim 18, wherein the resin is AMBERLITE XAD-4 or AMBERSORB 563.

20. The method of claim 15, wherein the temperature of the hydrogen peroxide solution inside the column is essentially constant during the step of passing the hydrogen peroxide solution through the column.

Suba1

21. The method of claim 15, wherein the hydrogen peroxide concentration in the hydrogen peroxide solution is maintained essentially constant during the step of contacting the resin with the hydrogen peroxide solution.

22. The method of claim 15, wherein the hydrogen peroxide solution is passed through the column in an upflow mode.

23. The method of claim 15, further comprising passing the hydrogen peroxide solution through a second column for removing organic impurities from the hydrogen peroxide solution, connected in series with and downstream from the first column.

24. The method of claim 15, further comprising passing the hydrogen peroxide solution through one or more columns containing an ion-exchange resin bed after passing the hydrogen peroxide solution through the column containing the preconditioned resin.